

WHAT IS CLAIMED IS:

1. A power amplification circuit comprising a power amplifier and a negative feedback circuit connected between a signal input terminal and a signal output terminal of the power amplifier, wherein

impedance of the negative feedback circuit depends on a signal voltage occurring across the negative feedback circuit.

2. The power amplification circuit according to Claim 1, wherein

the impedance of the negative feedback circuit increases as the signal voltage occurring across the negative feedback circuit increases.

3. The power amplification circuit according to Claim 1, wherein

the negative feedback circuit is a series connection circuit in which a diode and a capacitance device are connected in series.

4. The power amplification circuit according to Claim 1, wherein

the negative feedback circuit is a series connection circuit in which a diode, a capacitance device and a feedback resistor are connected in series.

5. The power amplification circuit according to Claim 1, wherein

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the negative feedback circuit is a series connection circuit in which a first diode and a second diode are connected to each other in series so that their forward directions are opposed to each other.

5 6. The power amplification circuit according to Claim 5, wherein

the first and second diodes of the series connection circuit are constituted of a base - emitter junction and a base - collector junction of one bipolar transistor, respectively.

7. The power amplification circuit according to Claim 5, wherein.

the first and second diodes of the series connection circuit are constituted of a junction between two terminals out of base, collector and emitter of a first bipolar transistor, and a junction between two terminals out of base, collector and emitter of a second bipolar transistor, respectively.

8. The power amplification circuit according to Claim 5, wherein

the first and second diodes of the series connection circuit are constituted of a junction between two terminals out of gate, drain and source of a first field effect transistor, and a junction between two

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terminals out of gate, drain and source of a second field effect transistor, respectively.

9. The power amplification circuit according to Claim 5, wherein

5 the second diode has a junction area larger than the first diode.

10. A power amplification circuit comprising a power amplifier and a negative feedback circuit connected between a grounding terminal of the power amplifier and ground, wherein

impedance of the negative feedback circuit depends on a signal voltage occurring across the negative feedback circuit.

11. The power amplification circuit according to Claim 10, wherein

the impedance of the negative feedback circuit decreases as the signal voltage occurring across the negative feedback circuit increases.

12. The power amplification circuit according to Claim 1, wherein

the negative feedback circuit is a series connection circuit in which a diode and a capacitance device are connected in series or a series connection circuit in which a diode, a capacitance device and a feedback resistor are connected in series,

a connecting point between the diode and the capacitance device is grounded via a grounding resistor, and

a bias power supply for the power amplifier is connected to one end of the series connection circuit so that the diode is biased.

13. The power amplification circuit according to Claim 12, wherein

the diode is constituted of a junction between two terminals out of base, collector and emitter of a bipolar transistor.

14. The power amplification circuit according to Claim 13, wherein

the power amplifier is constituted of a bipolar transistor,

the bipolar transistor constituting the diode and the bipolar transistor used for the power amplifier are generally equal to one another in bias-current temperature characteristics.

15. The power amplification circuit according to Claim 12, wherein

the diode is constituted of a junction between two terminals out of gate, drain and source of a field effect transistor.

DISCUSSION